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Education

Improve your value to your hospital by taking a technical training course. For more information, visit:
http://www3.medical.philips.com/en-us/education/course_index.asp

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Philips IntelliVue MP40 patient monitor

Philips connects

Monitors' messages as close (and quiet) as a nurse's wireless phone

At William Beaumont Hospital in Royal Oak, Michigan, the vision for the eight-level, 656,000-square-foot South Tower was to create a higher standard of excellence for the entire patient care experience. Clinical stakeholders and hospital administrators led the initiative, insisting that greater comfort, convenience, service and efficiency be valued as highly as the clinical quality of care.

One of the many steps toward realizing this vision was to improve overall communications, particularly to keep nurses connected with each other and with patients, physicians and relevant patient data.

With a successful pilot complete, the hospital planned to implement a low-power wireless phone system for nurses in the new care units. "At the same time, we were looking for better ways to communicate alarm information to nurses," explained John Crissman, Beaumont's manager of biomedical engineering.

"We knew this facility was going to have a large footprint. We couldn't expect the local alarm sound to be sufficient, and we had an internal design goal to keep the noise to the minimum."

Loudspeakers and traditional pages for patient alarm and other data were considered to be unacceptable alarm devices given the quantity of alarm events and other critical information that needed to be communicated.

"It wasn't practical to load each nurse down with a tool belt full of communications devices," said Crissman.

Fortunately for the nurses, their patients and overall care, Beaumont tapped into a more elegant solution via Philips

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PHILIPS

Beaumont Royal Oak campus
Photo credit: Peter Roberts, William Beaumont Hospital

At William Beaumont Hospital in Royal Oak, Michigan, Philips managed a project that included implementing an alarm messaging solution as well as designing, implementing and certifying a VLAN.

CUSTOMerCARE Value-Added Services. Philips alarm messages are sent via an Emergin plug and play interface to each nurse's SpectraLink wireless phone. The Dukane Nurse Call system also uses an Emergin interface to send nurse call events to the Spectralink phone.

Matching needs with solutions

The hospital opted for the Philips Intellivue patient monitoring system to provide the functionality it needed based on an established relationship with Philips, the company's expertise in monitoring and services and the available Emergin alarm integration option.

Philips IntelliVue patient monitors were to be installed in the new pediatric intensive care unit (PICU), pediatrics and in the new neuroscience unit. In the new neonatal intensive care unit (NICU), Philips Component Monitoring Systems (CMS) were moving over from the existing NICU. IntelliVue Information Centers were also planned for each, all interfacing via Emergin to the Spectralink wireless phones.

Managing the interface to transmit alarm data to third-party devices was something Philips had done more than 200 times before as part of its wireless messaging services. Philips, the hospital's biomed department and the hospital's IT/telecom department all had key roles in the project, working together to make the integration successful.

Investment protection matters

While investing in an improved overall care experience was paramount, Beaumont also placed a high premium on investment protection.

"There was no way we were going to replace the CMS monitors we had purchased just a few years before. Philips backward/forward compatibility meant that wasn't necessary," said Crissman.

It was also essential that all the monitors and the Information Centers be on a virtual local area network (VLAN), and Crissman looked to Philips to deliver that solution, too.

"A VLAN gives us the best of all worlds," said Crissman. "We capitalize on the hospital's investment in the LAN infrastructure, yet we achieve a segregation of the physiological alarm data.

"We've got all these VLANs going at the same time on the same infrastructure, and with a Philips VLAN running on our enterprise-wide network, it's as secure as if it were private," he added.

A new challenge begets a first and custom solution

"Beaumont was the first VLAN implementation we did of the IntelliVue Clinical Network," recalled Harvey Stroyan, Philips solution delivery consultant.

"We knew this was going to be a demand from our customers, but we had yet to standardize and streamline the processes. Beaumont really raised the bar for us, and we met the need," said Stroyan. "Philips now has a tried and true VLAN implementation process that we have used for the benefit of other hospitals as well."

Crissman credited Philips for assigning an expert IT resource who was able to immediately connect with hospital IT.

"We needed good customer support with this project," said Crissman. "Philips was able to provide that support to the biomedical engineering department, the IT department and to our clinical users."

Riding the wave of the future

It's quiet in the halls at Beaumont these days, a prime design criterion. "The overhead pages could be used in a disaster, but we have designed our communications to avoid being loud," said Crissman.

"The noise is local and minimal. The nurse notices when a call or alarm message comes in, but the patient doesn't."

A nurse call event from the Dukane system produces a regular ring on the phone while a physiologic alarm message triggers a distinct sound and cadence, prompting the nurse to know what to expect when they look down at the phone's display.

"The nurse sees the text and alarm data on the phone exactly as it looks on the Philips monitor," said Crissman.

As a shift ends and another begins, designated unit staff and/or nurse managers take a few minutes at the "Staff Assignment" PCs to assign staff, nurse call and alarm data. This task ensures nurse calls from patients and alarm data from the monitors get to the right nurse.

"The wave of the future is to have one device and one PC to manage multiple types of messaging. The hospital will get there with this advanced technology in place," said Crissman.

"We see this as an evolution," he added, allowing the hospital to move forward at its own pace to continually improve communications.

News

Philips new single-patient-use SpO2 sensors, primarily for infant and neonatal patients, are compatible with Philips, Agilent, Hewlett-Packard, and qualified competitors' monitors.

Partner with Philips for up to five years of service and training

A popular partnership program is continuing from Philips, offering special support agreement discounts and biomedical training vouchers for hospitals that invest in Cooperative Response Agreements when purchasing IntelliVue monitoring and telemetry systems.

Designed to reduce the cost of ownership for IntelliVue monitoring and telemetry solutions and provide needed biomedical training, the partnerships can last up to five years. Savings can exceed one year of support free and up to $3,485 in biomedical training.

For more information, contact your Philips patient monitoring sales representative.

Avalon fetal monitors feature enhanced measurement and documentation capabilities in a compact, ergonomic, and easy-to-use product.

Philips expands choice of sensors for patient care

Philips now offers two new single-patient-use SpO2 (pulse oximetry) sensors, primarily for infant and neonatal patients. The new disposable sensors are designed to provide greater comfort while maintaining a secure fit, using soft foam material and optimized adhesives.

The new Infant disposable SpO2 sensor was designed for use on patients 3-10kg. The new Neonatal disposable SpO2 sensor was designed for use on patients weighing less than 3kg as well as for larger infants from 10-20kg, and it can also be used for larger patients weighing over 40kg.

Both new sensors are compatible with Philips, Agilent, Hewlett-Packard, and qualified competitors' monitors. In addition, all Philips sensors are compatible with Philips FAST-SpO2 algorithm technology, which can discern a steady signal during patient movement and supports the widest array of SpO2 sensors in the industry.

An upgrade with enhancements focused on speed and quality is now available for PageWriter Touch cardiographs.

Philips announces Avalon fetal and maternal monitors

Philips announced its new line of fetal and maternal monitors, Avalon FM20 antepartum and Avalon FM30 intrapartum. Based on Philips IntelliVue patient monitoring platform, the new Avalon fetal monitors feature enhanced measurement and documentation capabilities in a compact, ergonomic, and easy-to-use product. Both monitors can be used to monitor multiple births and provide an easy-to-use interface that features touch screen operation and large, numeric, color screen displays.

Monitoring and measurement technology is integrated into the product's ultrasound transducers without increasing transducer size. Avalon FM transducers' housing parts conform to IP68 water and dust resistance standards, and are designed to be repairable by in-house biomedical staff.

Quality and speed are the focus of the PageWriter Touch release

The new A.02 software release for PageWriter Touch cardiographs is designed to greatly increase product quality and improve speed. An upgrade kit is available to all installed base users now. New shipments of the cardiograph include the performance improvements.

Extensive clinical testing has confirmed high product reliability and strong user satisfaction with the improved speed. Speed improvements include coming out of standby mode (time reduced by more than 30 percent) or rhythm strip printing initiation (time reduced by approximately 50 percent).

Other changes include networking enhancements, support for a Philips USB memory stick to remove the need for floppy disks or PCMCIA cards, and a simple mechanism for saving system logs to aid in troubleshooting.

For more information or to receive the upgrade, contact your local Philips cardiology representative or call the Philips CUSTOMerCARE Service Center.

The entire line of Philips HeartStart defibrillators will meet the newly updated American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Virtually all Philips HeartStart defibrillators currently available, including the Home, OnSite, FRx, FR2+, ForeRunner and MRx, shown here, can be reconfigured now to support the new one-shock defibrillation protocol recommended in the 2005 Guidelines.

Q&A

I recently received a M2601B transmitter to replace my defective one, but it does not work. When I insert batteries into the transmitter, the LEDs flash and the unit emits a beeping sound. Why is that?

The above symptoms indicate that the transmitter is a "New Device" and will need to be configured. M2601B transmitters can be configured with the new PC-based service tool or with a TeleMon C monitor as described here.

I. Configuring M2601B transmitters with the service tool

The service tool for the M2601B transmitters (and M4841A transceivers) comes on a CD-ROM and can be ordered using part number 453564017001. Other materials and equipment needed for use with the service tool are:

- Service PC with CD drive and running either Windows 2000 (with Service Pack 4 or higher) or Windows XP. The service tool does ***not*** run on PCs using Windows 95 OS.
- Service interface cable that connects your PC to the transmitter. The cable is ordered separately as part number 453564007401.
- AA batteries for the M2601 transmitter.

Configure the M2601B transmitter as follows:

1. Install the service tool software on your service PC. If this has already been done, you may skip to step 4.
2. Insert the CD-ROM into the service PC.
3. Double click on the **Install.bat** executable on the CD to automatically create and copy all files to the **C:\TelemetryPWD** directory on your service PC.

   NOTE: Do not rename the directory or folder where the service tool resides. The service tool will not run if the directory or folder is renamed.
4. Terminate any PC applications or services that are currently using the COM1 port on the PC.
5. Remove the batteries from the transmitter. Connect the service interface cable to the COM1 port on the PC and the other end to the serial port on the device.
6. Go to the **C:\Telemetry\PWD** directory, open the **TeleCfgTool** folder and double click on the **TeleCfgTool.exe** icon to open the service tool program.
7. Go to the top left hand corner of the screen and click on the **Actions** drop down menu.
8. Click on **Connect** to establish the connection to the device. Quickly insert two good AA batteries into the device while the "connection progress bar" is completing its connection. Insert batteries before the progress bar reaches 75% of range. If the connection fails, an error is displayed. Retry connecting the device again following steps 7 and 8.
9. When connection to the device has been completed, the **Device Type** dialog screen will automatically appear on the PC with the connected device's description, e.g. M2601B with SpO2. Also the device's firmware revisions and configuration status information is shown.
10. Click on the **Edit Form** button.

    Note: Only white highlighted fields are editable.
11. Enter the appropriate frequency. Note that the new service tool no longer requires you to enter the check code. Make other changes as necessary such as volume and RF Auto ShutOff.
12. Click on **Update Device Configuration** button. To verify that the changes have been successfully implemented, go to the **Actions** drop down menu in the top left tool bar and click on **Read Device** to view the revised status of the device.
13. At this point you should get an "Invalid Signal E01" INOP in the sector at the IntelliVue Information Center (IIC). If you do not get this INOP, ensure that the telemetry is not in standby. Follow the Learn Code procedure at the IIC to complete the configuration process.

II. Learn Code

1. Select **Patient Window >> All Controls >> Unit Settings.**
2. Under Bedside Unit Settings, select **Telemetry Freq**.
3. Enter the password.
4. Identify the correct receiver, frequency and check code listed.
5. Select and highlight the correct receiver.
6. Click on the **Learn Xmit Code** button and within one minute you must press and hold the nurse call (the button *without* the check mark) button until the E01 error goes away.

III. Configuring the transmitter with the M2636C TeleMon C monitor

The M2601B transmitter connects to the M2636C TeleMon C via a 9-foot quick release cable rather than physically docking it into the unit. Do ***NOT*** try to dock the transmitter into the docking port of the TeleMon as it may damage the device.

NOTE: The M2601B is not supported on the M2636B TeleMon B monitor.

When disconnecting the cable using the quick release mechanism, press the latch whenever possible to reduce wear on mechanism components.

1. Insert two good AA batteries into the transmitter.
2. Connect the quick disconnect of the cable together and insert the **cable connector** into the connector on the side of the transmitter.

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3. Turn the TeleMon ON.
4. After the logo appears at the center of the screen, and the message "PUSH button for Service" appears, press the check button below the display.
5. Select **TeleMon and Transmitter Service** from the General Configuration Menu and press **Go**.
6. Enter the password and press **Enter Password.**
   - Use the **Select digit** arrows to change the number
   - Use the **Navigate through digits** button to move the cursor to the next field.
7. Select **Configure Transmitter** and press **Go**.
8. Select **RF Configuration** and press **Go**.
9. Press the **Adjust Frequency** button to select the appropriate frequency. Note the frequencies jump in increments of 125KHz.
10. Press **Done**.
11. The message "You have made changes. Do you want to save?" is displayed. Press the **Accept** button to approve the changes.
12. Enter the password.
13. Enter the Check Code and press the Enter **Check Code button**.
14. Press **Done.**
15. Press the **Done** button again until the message "Do you want to exit Service Mode?" appears.
16. Press **Accept** to return to the General Configuration Menu.
17. Proceed to the **Learn Code** procedure documented above.

- M2636B is the TeleMon B Companion Monitor
- M2636C is the TeleMon C Companion Monitor
- Reference chapter 1 of Software Installation and Configuration Guide 4535 640 21631 for additional information on step I above.
- Reference chapter 4 of Service Manual M2636-90063 and page 2-9 of Instructions for Use M2636-9121C for additional information on step III above.
- Service password is documented in Service Manual M2636-90063 or can be obtained by calling the Philips CUSTOMerCARE Service Center at 800 722 9377

AAMI2006 CONFERENCE & EXPO

PEER EXCHANGE: Share your valuable views and insights on medical products and services at the AAMI conference. If you are interested in participating in focus groups, send a message with AAMI in the subject line by June 9 to: **marketresearch@philips.com**

Capitalize on the opportunities and location of AAMI 2006

Washington, D.C. is the host city for the 2006 annual meeting of the Association for the Advancement of Medical Instrumentation (AAMI). The AAMI conference and exposition is scheduled June 24-26 at the Marriott Wardman Park Hotel.

Philips engineers will offer their expertise at the education sessions and product showcase theatre.

During exhibit hours, technical solutions specialists will be in the Philips booth #500 to demonstrate monitoring, diagnostic ECG and resuscitation products. Service specialists will be there to discuss Philips value-added services, which hospitals use for many needs ranging from hardware installations to custom network design.

Wireless technologies are the focus of the three Philips presentations on the education calendar.

Join Eric Anderson, Philips director of hardware quality engineering, and Dara McLain, Philips EMC engineer, for a two-part session on Sunday, June 25. From 1 to 2:15 p.m., they will present "RF Wireless in Healthcare (Part I): Challenges and Solutions – Proceed with Caution." Then from 2:30 to 3:45 p.m., it's "RF Wireless in Healthcare (Part II): Conducting RF Surveys for EMC Management."

Anderson and McLain will also be in the Philips booth to answer questions and talk with biomedical and clinical engineers.

Mark Kotfila, Philips director of patient monitoring engineering research and development, and Paul Coss, Philips patient monitoring product manager, will present "An Effective Decision-Making Process for Selecting and Installing Wireless Technology" on Monday, June 26 from 2:30 to 3:45 p.m.

Kotfila and Coss will provide a framework for decision-making, giving attendees the tools to analyze how their hospitals can determine the appropriate solution(s) to meet wireless needs now and into the future.

The product showcase theatre will feature Philips programs on asset tracking, patient monitoring solutions, and radio frequency analysis. Check your conference guide for dates and times.

Education

Classroom Instruction June – October 2006

All Philips Education Center courses are developed and tested by the professionals you've come to rely upon for their technical expertise. For more information on Cardiac and Monitoring Systems classes, you can visit: www.medical.philips.com/us. Click Education, then Biomedical Service Training. You can also email victoria.kirk@philips.com for Cardiac and Monitoring classes, and deborah.schmidt@philips.com for Ultrasound Classes. For Canada, please check the web address noted here for the latest information.

Philips IntelliVue Info Center (4 days): $3,485 U.S.

Dallas, TX	June 6
Hoffman Estates, IL	June 6
Phoenix, AZ	July 11
Cleveland, OH	July 18
Atlanta, GA	August 15
Cleveland, OH	August 22
Hoffman Estates, IL	August 22
Dallas, TX	September 12
Paramus, NJ	September 19

OB TraceVue (4 days): $3,785 U.S.

Cleveland, OH	June 12
Cleveland, OH	August 7
Cleveland, OH	September 25

Digital Telemetry (2 days): $2,000 U.S.

Dallas, TX	June 12
Hoffman Estates, IL	June 12
Phoenix, AZ	July 17
Cleveland, OH	July 24
Atlanta, GA	August 21
Cleveland, OH	August 28
Hoffman Estates, IL	August 28
Dallas, TX	September 18
Paramus, NJ	September 25

IntelliVue Patient Monitor MP Series (3 days): $2,300 U.S.

Dallas, TX	June 14
Hoffman Estates, IL	June 14
Phoenix, AZ	July 19
Cleveland, OH	July 26
Atlanta, GA	August 23
Cleveland, OH	August 30
Hoffman Estates, IL	August 30
Dallas, TX	September 20
Paramus, NJ	September 27

Anesthetic Gas Module (2 days): $2,000 U.S.

Atlanta, GA	June 28

IntelliVue Telemetry (4 days): $3,485 U.S.

Cleveland, OH	July 10
Cleveland, OH	September 25

Component Monitoring System (3 days): $2,300 U.S.

Atlanta, GA	August 30

IntelliVue Clinical Network (3 days): $2,960 U.S.

Cleveland, OH	July 24
Cleveland, OH	September 11

Network Concepts (3 days): $2,300 U.S.

Atlanta, GA	September 6

TraceMasterVue (3 days): $3,485 U.S.

Cleveland, OH	September 18

All Ultrasound classes are held in Cleveland:

iU22/iE33 (3 days): $6,000	July 31 September 11
HD11 (3 days): $6,000 U.S.	June 5
HDI 3000/3500/5000 (4 days): $6,000 U.S.	August 14
Envisor (3 days): $6,000 U.S.	August 7
SONOS 4500/5500/7500 (4 days): $6,000 U.S.	July 31

Customer Support Center

Philips CUSTOMerCARE Service Center is a worldwide network of facilities dedicated exclusively to telephone customer support. Engineering and clinical applications specialists help biomedical professionals address operations and applications issues related to the company's equipment. For fast, quality answers, call the number in your area.

U.S. 800 722 9377 **Canada** 800 323 2280

Parts Service/Phone Numbers

Parts Orders and Identification in U.S.: 800 722 9377
PMS Business Centre in Canada: 800 291 6743 (for non-contractual customers)